

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

KANAYA et al.

Application No. Unassigned Art Unit: Unassigned

Filed: October 10, 2001 Examiner: Unassigned

For: HIGH FREQUENCY
SEMICONDUCTOR
INTEGRATED CIRCUIT
CAPABLE OF SWITCH-
ING BETWEEN
CHARACTERISTICS
THEREOF

PENDING CLAIMS AFTER ENTRY OF PRELIMINARY AMENDMENT

1. A high frequency semiconductor integrated circuit comprising:
a main circuit having an active element and a first pad;
a circuit block of a passive element;
a second pad connected to said circuit block; and
a wire connecting said first pad to said second pad.
2. The high frequency semiconductor integrated circuit according to claim 1,
wherein said main circuit includes an input terminal and an output terminal and said
active element and said first pad are located between said input terminal and said output
terminal.
3. The high frequency semiconductor integrated circuit according to claim 2,
wherein said passive element has an impedance that decreases with an increase in
frequency of an input signal input to said input terminal.

4. The high frequency semiconductor integrated circuit according to claim 2, wherein said circuit block includes an interconnect connected to said second pad and wherein said wire and said interconnect have lengths totaling one-fourth of a wavelength of a high frequency signal input to said input terminal.

5. A high frequency semiconductor integrated circuit comprising:
a main circuit having an active element and a main pad;
plural circuit blocks, each circuit block constituted of a passive element;
plural connection pads corresponding to respective plural circuit blocks; and
a wire for connecting said main pad to one of said plural connection pads.

6. The high frequency semiconductor integrated circuit according to claim 5, wherein said main circuit includes an input terminal and an output terminal and said active element and said main pad are located between said input terminal and said output terminal.

7. The high frequency semiconductor integrated circuit according to claim 6, wherein said plural circuit blocks include:

a first circuit block for adjusting an impedance of said main circuit to a first impedance;

a second circuit block for adjusting the impedance of said main circuit to a second impedance; and

a third circuit block for adjusting the impedance of said main circuit to a third impedance.

8. The high frequency semiconductor integrated circuit according to claim 7, wherein

said first circuit block is constituted of a first capacitor having a first capacitance and connected to a ground node at a first end of said first capacitor and a first connection pad at a second end of said first capacitor,

said second circuit block is constituted of a second capacitor having a second capacitance and connected to the ground node at a first end of said second capacitor and a second connection pad at a second end of said second capacitor, and

said third circuit block is constituted of a third capacitor having a third capacitance and connected to the ground node at a first end of said third capacitor and a third connection pad at a second end of said third capacitor.

9. A high frequency semiconductor integrated circuit comprising:
a first high frequency semiconductor integrated circuit;
a second high frequency semiconductor integrated circuit; and
a main wire for connecting said first high frequency semiconductor integrated circuit to said second high frequency semiconductor integrated circuit.

10. The high frequency semiconductor integrated circuit according to claim 9, wherein

said first high frequency semiconductor integrated circuit comprises a main circuit having an active element and a circuit block having a passive element; and

said second high frequency semiconductor integrated circuit includes only a main circuit having an active element.

11. The high frequency semiconductor integrated circuit according to claim 10, wherein

said second high frequency semiconductor integrated circuit includes a first main circuit having a first active element and a first pad, and

said first high frequency semiconductor integrated circuit includes:

a circuit block having a passive element;

a second pad connected to said circuit block;

a second main circuit having a third pad for connecting said first and second pads to each other, and a second active element; and

a wire for connecting said second pad to said third pad, wherein said main wire connects said first pad to said third pad.

12. The high frequency semiconductor integrated circuit according to claim 11, wherein

said first main circuit further includes:

an interconnect connected at a first end to said first pad and at a second end to said first active element; and

an output terminal connected to said first active element, and

said second main circuit further includes:

an interconnect connected at a first end to said third pad and at a second end to said second active element; and

an input terminal connected to said second active element.

13. The high frequency semiconductor integrated circuit according to claim 12, wherein said circuit block includes a passive element for matching an impedance of said first main circuit to an impedance of said second main circuit.

14. The high frequency semiconductor integrated circuit according to claim 9, wherein

said first high frequency semiconductor integrated circuit includes only one main circuit having an active element, and

said second high frequency semiconductor integrated circuit includes only one circuit block having a passive element.

15. The high frequency semiconductor integrated circuit according to claim 14, wherein

said first high frequency semiconductor integrated circuit includes a main circuit having an active element and a main pad,

said second high frequency semiconductor integrated circuit includes plural circuit blocks, each circuit block having a passive element, and

plural connection pads corresponding to respective plural circuit blocks, wherein said main wire connects said main pad to one of said plural connection pads.